

TRAITE DE COOPERATION EN MATIERE DE BREVETS


PCT

REC'D 25 JAN 2005

RAPPORT D'EXAMEN PRELIMINAIRE INTERNATIONAL

PCT

(article 36 et règle 70 du PCT)

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| Référence du dossier du déposant ou du demandeur | | POUR SUITE A DONNER voir la notification de transmission du rapport d'examen préliminaire International (formulaire PCT/PEA/416) | |
| Demande internationale No. PCT/FR 03/02702 | | Date du dépôt international (jour/mois/année) 12.09.2003 | Date de priorité (jour/mois/année) 18.09.2002 |
| Classification internationale des brevets (CIB) ou à la fois classification nationale et CIB G25B3/02 | | | |
| Déposant ROQUETTE FRERES et al. | | | |
| <p>1. Le présent rapport d'examen préliminaire international, établi par l'administration chargée de l'examen préliminaire international, est transmis au déposant conformément à l'article 36.</p> <p>2. Ce RAPPORT comprend 5 feuilles, y compris la présente feuille de couverture.</p> <p><input type="checkbox"/> Il est accompagné d'ANNEXES, c'est-à-dire de feuilles de la description, des revendications ou des dessins qui ont été modifiées et qui servent de base au présent rapport ou de feuilles contenant des rectifications faites auprès de l'administration chargée de l'examen préliminaire International (voir la règle 70.16 et l'instruction 607 des Instructions administratives du PCT).</p> <p>Ces annexes comprennent : feuilles.</p> | | | |
| <p>3. Le présent rapport contient des indications et les pages correspondantes relatives aux points suivants :</p> <p>I <input checked="" type="checkbox"/> Base de l'opinion</p> <p>II <input type="checkbox"/> Priorité</p> <p>III <input type="checkbox"/> Absence de formulation d'opinion quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle</p> <p>IV <input type="checkbox"/> Absence d'unité de l'invention</p> <p>V <input checked="" type="checkbox"/> Déclaration motivée selon la règle 66.2(a)(ii) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration</p> <p>VI <input type="checkbox"/> Certains documents cités</p> <p>VII <input type="checkbox"/> Irrégularités dans la demande internationale</p> <p>VIII <input type="checkbox"/> Observations relatives à la demande internationale</p> | | | |
| Date de présentation de la demande d'examen préliminaire Internationale | | Date d'achèvement du présent rapport | |
| 01.04.2004 | | 20.01.2005 | |
| Nom et adresse postale de l'administration chargée de l'examen préliminaire International | | Fonctionnaire autorisé | |
|  <p>Office européen des brevets D-80298 Munich Tél. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465.</p> | | <p>Hammerstein, G</p> <p>N° de téléphone +49 89 2399-8175</p> | |



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(Toute feuille de remplacement comportant des modifications de cette nature doit être indiquée au point 1 et annexée au présent rapport.)

**RAPPORT D'EXAMEN
PRÉLIMINAIRE INTERNATIONAL**

Demande internationale n°

PCT/FR 03/02702

6. Observations complémentaires, le cas échéant :

V. Déclaration motivée selon l'article 35(2) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration

| | | | |
|----------------------------------------|------|----------------|----------|
| 1. Déclaration Nouveauté | Oui: | Revendications | 1-7,9-12 |
| | Non: | Revendications | 8,13 |
| Activité inventive | Oui: | Revendications | 1-7,9-12 |
| | Non: | Revendications | |
| Possibilité d'application industrielle | Oui: | Revendications | 1-13 |
| | Non: | Revendications | |

2. Citations et explications

voir feuille séparée

Concernant le point V

Déclaration motivée quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration

1. Il est fait référence aux documents suivants :

D1: EP-A-1 027 931 (CHUGAI PHARMACEUTICAL CO LTD) 16 août 2000 (2000-08-16)

D2: WO 91/04988 A (TNO) 18 avril 1991 (1991-04-18).

2. La présente demande ne remplit pas les conditions énoncées dans l'article 33(1) PCT, l'objet des revendications 8 et 13 n'étant pas conforme au critère de nouveauté défini par l'article 33(2) PCT.

Le document D1 (alinéas [0001], [0011], [0017]-[0020], [0026], [0027]) décrit un procédé de préparation d'une composition polycarboxylique (alinéa [0015]) (un polymère qui porte un groupe saccharidique par monomère est considéré comme une composition polysaccharidique, une étape de polymérisation n'étant pas exclue par le procédé des revendications 1-7).

Le document D2 (page 6, lignes 9-23 et page 4, ligne 34 - page 6, ligne 8) décrit un procédé de préparation d'acide polyglucuronique. D2 fait mention d'acides tricarboxyliques obtenus en absence de complexants (page 5, lignes 15-19) et d'acides dicarboxyliques (page 10, lignes 14-18).

Une composition polycarboxylique, ainsi que son utilisation dans l'industrie pharmaceutique, sont donc connues des documents D1 et D2.

Des monosaccharides polycarboxyliques sont de plus per se connus dans l'état de la technique.

Le fait que la composition polycarboxylique de la revendication 8 est obtenue par un procédé de fabrication différent de celui divulgué dans l'art antérieur ne confère pas pour autant à l'objet de cette revendication un caractère de nouveauté.

3. Les compositions caractéristiques des revendications 9-12 ne sont pas anticipées par l'art antérieur. Les revendications 9-12 sont donc nouvelles et inventives (art. 33(1) PCT).

Le document D1 (exemple 7) décrit un procédé de préparation d'une composition monocarboxylique comprenant une étape au cours de laquelle on soumet une composition monosaccharidique protégée en C1 à un traitement d'oxydation électrochimique en présence de bromure de sodium (en absence d'hypochlorite de sodium) et en présence d'un oxyde d'amine (alinéas [0010]-[0012]) et d'une anode en carbone.

L'objet des revendications 1-7 diffère du procédé connu en ce que l'obtention de compositions polycarboxyliques n'est pas possible. Le problème résolu est une augmentation des taux en matières dicarboxyliques et tricarboxyliques.

L'objet des revendications 1-7 est donc nouveau et inventif (article 33(1) PCT).

Translation

PATENT COOPERATION TREATY

PCT/FR2003/002702



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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Applicant's or agent's file reference BCT030111/DBO | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/FR2003/002702 | International filing date (day/month/year) 12 septembre 2003 (12.09.2003) | Priority date (day/month/year) 18 septembre 2002 (18.09.2002) |
| International Patent Classification (IPC) or national classification and IPC C25B 3/02 | | |
| Applicant ROQUETTE FRERES | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

| | |
|----------------------------------------------------------------|-------------------------------------------------------------------|
| Date of submission of the demand 01 avril 2004 (01.04.2004) | Date of completion of this report 20 January 2005 (20.01.2005) |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FR2003/002702

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-26 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 1-13 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FR 03/02702

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

| | | | |
|-------------------------------|--------|-----------|-----|
| Novelty (N) | Claims | 1-7, 9-12 | YES |
| | Claims | 8, 13 | NO |
| Inventive step (IS) | Claims | 1-7, 9-12 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-13 | YES |
| | Claims | | NO |

2. Citations and explanations

1. This report makes reference to the following documents:

D1: EP-A-1 027 931 (CHUGAI PHARMACEUTICAL CO LTD),
16 August 2000 (2000-08-16)

D2: WO 91/04988 A (TNO), 18 April 1991 (1991-04-18)

2. The present application does not comply with PCT Article 33(1) because the subject matter of claims 8 and 13 does not meet the requirement of PCT Article 33(2) for novelty.

Document D1 (paragraphs [0001], [0011], [0017]-[0020], [0026], [0027]) describes a process for preparing a polycarboxylic composition (paragraph [0015]) (a polymer that bears a saccharide group for each monomer is regarded as being a polysaccharide composition, since the process as per claims 1-7 does not exclude a polymerisation step).

Document D2 (page 6, lines 9-23, and page 4, line 34 - page 6, line 8) describes a process for preparing polyglucuronic acid. D2 mentions tricarboxylic acids produced in the absence of complexing agents (page

5, lines 15-19) and dicarboxylic acids (page 10, lines 14-18).

Documents D1 and D2 thus describe polycarboxylic compositions and their use in the pharmaceutical industry.

Polycarboxylic monosaccharides are also known *per se* from the prior art.

The fact that the polycarboxylic composition as per claim 8 is produced by a preparation process that differs from the process disclosed in the prior art does not make the claimed subject matter novel.

3. The compositions as per claims 9-12 are not anticipated by the prior art. Claims 9-12 are thus novel and inventive (PCT Article 33(1)).

Document D1 (example 7) describes a process for preparing a monocarboxylic composition, the process comprising a step during which a monosaccharide composition protected at C1 is subjected to electrochemical oxidation in the presence of sodium bromide (in the absence of sodium hypochlorite) and in the presence of an amino-oxide (paragraphs [0010]-[0012]) and of a carbon anode.

The subject matter of claims 1-7 differs from the known process in that it is not possible to obtain polycarboxylic compositions. The problem addressed is that of increasing the dicarboxylic and tricarboxylic material content.

The subject matter of claims 1-7 is therefore novel and inventive (PCT Article 33(1)).

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